US005165145A

United States Patent [19]

Sherman

[11] Patent Number: 5,165,145

[45] Date of Patent: Nov. 24, 1992

[54] **HINGE FOR USE WITH PORTABLE ELECTRONIC APPARATUS**

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[21] Appl. No.: **589,141**

[22] Filed: **Sep. 27, 1990**

[51] **Int. Cl.**[5] **E05C 17/64**; E05D 11/08

[52] **U.S. Cl.** **16/341**; 16/342

[58] **Field of Search** 16/337, 341, 342, 340

[56] **References Cited**

U.S. PATENT DOCUMENTS

1,644,249	10/1927	Harrison	16/340
3,052,497	9/1962	Lohr	16/341
4,571,456	2/1986	Paulson et al.	179/2 C
4,624,434	11/1986	Lake, Jr. et al.	248/454
4,781,422	11/1988	Kimble	312/72
4,808,017	2/1989	Sherman et al.	400/83
4,859,092	8/1989	Makita	400/83

FOREIGN PATENT DOCUMENTS

472975	5/1951	Canada	16/340

OTHER PUBLICATIONS

Design News Magazine, dated Feb. 12, 1990, pp. 262 & 263, article "Constant-Torque Slip Clutch Supports Computer Screen" by Charles J. Murray.

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[57] **ABSTRACT**

A hinge mechanism is disclosed which is suitable for use on a pivotable character display for an electronic typewriter or portable computer. The hinge mechanism includes braking means for maintaining the character display in a viewing position, wherein friction is generated between disc shaped brake members of the hinge mechanism. Moreover, the addition of a cam in the hinge mechanism provides the selective use of torque to the braking means; the cam is engaged when the display is in a viewing position, preventing the display from slipping out of position, whereas the cam is not engaged when the display is near the horizontal, making it easier to raise and to lower the display. The hinge mechanism disclosed is suitable for use with multi-view position character displays as well as with single view position character displays.

19 Claims, 6 Drawing Sheets